

REMARKS

Obviousness-Type Double Patenting

Claim 83 stands rejected under the judicially created doctrine of obviousness-type double patenting as "unpatentable" over claims 3-5 of United States patent 6,114,598, issued 9/5/00.

Applicants submit herewith a terminal disclaimer in compliance with 37 C.F.R. § 1.321(c), thereby obviating the rejection.

Rejections Under 35 U.S.C. § 112, First Paragraph

Claims 86-88, 95-97 and 104-109 stand rejected under 35 U.S.C. § 112, first paragraph (enablement and written description). Specifically, the Examiner asserts that the specification discloses only "a single YAC vector which comprises a Spe restriction fragment of the germline human heavy chain Ig locus which includes V6, the D segment genes, the J segment genes, C μ and C δ ". The Examiner further asserts that the specification does not provide guidance for any YAC vector other than the vector shown in Figure 16. In the Examiner's view, the specification lacks guidance for obtaining, and thus it would require undue experimentation to obtain, a DNA sequence that includes other VH genes from chromosome 14.

The Examiner further asserts that the specification lacks written description for functional V segment genes distal to the D segment genes on chromosome 14. Applicants traverse.

As noted in the Response filed April 4, 2001, the application, as filed, discloses at least three YACs each of

which contains multiple human chromosome 14 VH genes and a transgenic mouse with multiple human VH genes from chromosome 14.

For example, at page 56, lines 7-23, describes the cloning of two YACs (205 kb and 215 kb) each of which contained "at least 5 VH genes including two VH1, one VH2, one VH4 and one VH6 gene."

Further, the application, as filed, at page 57, lines 1-17, describes the cloning of a third YAC (A287-C10; 230 kb). That is not the YAC depicted in Figure 16(C). Figure 16(C) depicts the YAC replacement vector described in Example VII.

In fact, page 59, lines 15- to page 60, line 3, describes Southern analysis of the A287-C10 YAC with VH probes confirming the presence in the YAC of two human VH1 genes in addition to at least one VH2 gene, VH4 gene and VH6 gene. The application states on page 59, line 35 to page 60, line 3 that the A287-C10 YAC contains a fragment of human chromosome 14 from the 3'-most VH2 gene of the locus and extending to an EcoRI site 3' of the delta locus. The A287-C10 YAC, thus contains at least 5 human V genes, the entire human J region, the entire human D region, human C μ and human C δ .

Further, page 69, line 29 to page 70, line 34, describes the production of transgenic mice from ES cells containing the human DNA from the A287-C10 YAC. Applicants, thus, were in possession of the claimed invention as of the filing date of the application.

In view of this disclosure, the application, as filed, enables the production of transgenic mice with multiple human VH genes. In addition, the application, as filed, provides written description for both a chimeric and a transgenic mouse containing multiple human VH genes.

Accordingly, applicants request that the rejections under § 112, first paragraph, be withdrawn.

In view of the above, applicants request withdrawal of the rejections and reconsideration and allowance of the amended claims.

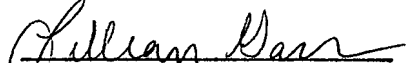
Respectfully submitted,



Jane T. Gunnison (Reg. No. 38,479)
Attorney for Applicants
c/o FISH & NEAVE
1251 Avenue of the Americas
New York, New York 10020-1104
Tel.: (212) 596-9000

I Hereby Certify that this
Correspondence is being
Deposited with the U.S.
Postal Service as First
Class Mail in an Envelope
Addressed to:
COMMISSIONER FOR
PATENTS P.O. Box 2327
ARLINGTON, VA 22202 on

December 20, 2001
Lillian Garcia


Signature of Person Signing